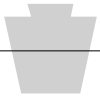


NAME			<h1>KUTZTOWN</h1> <h2>UNIVERSITY</h2>			
EFFECTIVE DATE FALL 2018 GENERAL EDUCATION VERSION 2188						
DEGREE REQUIREMENTS						
GENERAL EDUCATION						
<h3>Student Learning Outcomes (SLO)</h3> <p>Upon completion of the requirements for the General Education Program, students will be able to:</p> <ol style="list-style-type: none">communicate clearly and effectively orally and in writing.apply scientific and quantitative reasoning to solve problems and increase knowledge.apply skills in critical analysis and reasoning for the interpretation of data.engage critically with creative or artistic works.demonstrate the ability to retrieve, interpret, evaluate, and use information.analyze the role of values, ethics, diversity, and multiple perspectives in local and global society.demonstrate an understanding of various models for the development of the whole person.explore concepts, ideas, and methods from a variety of disciplines.						
<p>Use this checksheet to plan your degree program. Meet every semester with your academic advisor to be sure that you are taking courses that are required to attain the degree you are seeking. Discuss your goals and choose courses that will help you to attain them. Get the most out of your education by taking advantage of everything that Kutztown University has to offer.</p> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>			<h3>First Year Seminar: Discovering College</h3>		CREDITS REQUIRED	3
			THESE COURSES MEET SLO 5 & 7		CREDITS EARNED:	
			COURSE NUMBER	COURSE NAME	GR	CR
			FYS 100	First Year Seminar		
			TRANSFER STUDENTS TRANSFERRING 30 CREDITS OR MORE AND NOT TRANSFERRING AN FYS OR FYE COURSE MAY SELECT ANY APPROVED GENERAL EDUCATION COURSE TO MEET THEIR FYS REQUIREMENT.			
TRANSFER ELECTIVE:						
<h3>A Communicating With And About the World</h3>			CREDITS REQUIRED	12		
THESE COURSES MEET SLO 1 & 5			CREDITS EARNED:			
COURSE NUMBER	COURSE NAME	GR	CR			
1	COMPOSITION 100 LEVEL CMP 1__					
2	COMPOSITION 200 LEVEL CMP 2__					
3	SPEAKING					
4	ANY WRITING (A2) OR SPEAKING COURSE (A3) OR FROM THE APPROVED LIST					
COURSES IN CATEGORIES B, C & D MUST BE TAKEN OUTSIDE THE STUDENT'S MAJOR. THE MAJOR IS DEFINED AS THE PREFIX THAT IDENTIFIES THE MAJOR. CONCOMITANT REQUIREMENTS MAY BE TAKEN TO MEET GENERAL EDUCATION REQUIREMENTS.						
<h3>B Understanding Self & Others</h3>			CREDITS REQUIRED	9		
THESE COURSES MEET SLO 3 & 6			CREDITS EARNED:			
COURSE NUMBER	COURSE NAME	GR	CR			
1						
2						
3						
<h3>C Understanding Science & Technology</h3>			CREDITS REQUIRED	9-12		
THESE COURSES MEET SLO 2 & 3			CREDITS EARNED:			
COURSE NUMBER	COURSE NAME	GR	CR			
1	SCIENTIFIC INQUIRY					
2	QUANTITATIVE REASONING					
3	ANY COURSE APPROVED FOR C1 OR C2					
<h3>D Understanding & Creating Ideas</h3>			CREDITS REQUIRED	9		
THESE COURSES MEET SLO 4 & 6			CREDITS EARNED:			
COURSE NUMBER	COURSE NAME	GR	CR			
1						
2						
3						
TOTAL GENERAL EDUCATION CREDITS 42-45						
FIND A FULL EXPLANATION OF THE GENERAL EDUCATION PROGRAM AT WWW.KUTZTOWN.EDU						

PROGRAM CODE ULASPHYAS	COLLEGE OF LIBERAL ARTS AND SCIENCES	
EFFECTIVE DATE FALL 2018	<div>PHYSICS</div> <hr/> <div>BACHELOR OF SCIENCE</div>	
VERSION NUMBER 2188		
ASTRONOMY TRACK		
STUDENT:		STUDENT ID NUMBER:

MAJOR PROGRAM

Core		
COURSE	CR	GRADE
PHY 100: PHYSICS I	4	
PHY 102: PHYSICS II	4	
PHY 212: MODERN PHYSICS I	3	
PHY 214: MODERN PHYSICS II	3	
PHY 220: ELECTRONICS	3	
PHY 230: OPTICS	3	
PHY 245: MATHEMATICAL PHYSICS I	3	
PHY 312: CLASSICAL MECHANICS I	4	
PHY 315: ADVANCED LAB	3	
PHY 316: ELECTROMAGNETISM I	3	
PHY 327: THERMO. AND STAT. MECH.	3	
PHY 340: COMPUTATIONAL PHYSICS	3	
PHY 380: SENIOR SEMINAR	3	
TOTAL CREDITS	42	

Astronomy Track		
COURSE	CR	GRADE
PHY 360: QUANTUM MECHANICS I	3	
AST 140: PLANETARY SCIENCE	3	
AST 142: STELLAR & GALACTIC ASTRONOMY	3	
AST 342 / PHY 342: ASTROPHYSICS	3	
ANY AST COURSE ABOVE 200	3	
TOTAL CREDITS	15	

CONCOMITANT COURSES

Chemistry		
COURSE	CR	GRADE
CHM 100: GENERAL CHEMISTRY I	*	
CHM 102: GENERAL CHEMISTRY II	4	


Mathematics		
COURSE	CR	GRADE
MAT 181: CALCULUS I	*	
MAT 182: CALCULUS II	4	
MAT 283: CALCULUS III	4	
MAT 340: DIFFERENTIAL EQUATIONS	3	

Biology		
COURSE	CR	GRADE
BIO 104: PRINCIPLES OF BIOLOGY	*	
TOTAL CREDITS	15	

Free Electives <small>CHOOSE ANY UNIVERSITY COURSE THAT COUNTS TOWARD GRADUATION</small>		
COURSE	CR	GRADE
	3	
TOTAL CREDITS	3	

NOTE:

* REQUIRED FOR THE MAJOR. SATISFIES GENERAL EDUCATION REQUIREMENT UNDERSTANDING SCIENCE AND TECHNOLOGY

GRADUATION REQUIREMENTS					
		REQUIRED	✓		REQUIRED
	GENERAL EDUCATION CREDITS	42-45		COMPREHENSIVE EXAM	PASS
	PROGRAM CREDITS (MINIMUM)	72		MINIMUM QPA OVERALL	2.0
	FREE ELECTIVE CREDITS	3		MINIMUM QPA IN MAJOR	2.0
	TOTAL CREDITS	120			

B.S. in Physics / Astronomy¹

(This document should not be considered as a substitute for the official program check sheet or a comprehensive discussion with your advisor. Also please refer to the program check sheet for all the footnotes, other guidelines, and requirements.)

First Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 100	Physics I	4	PHY 102	Physics II	4
MAT 181	Calculus I	4	MAT 182	Calculus II	4
CHM 100	General Chemistry I	4	CHM 102	General Chemistry II	4
FYS 100	<i>First Year Seminar</i>	3	AST 142	Stellar & Galactic Astronomy	3
		15			15

Second Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 212	Modern Physics I	3	PHY 214	Modern Physics II	3
PHY 245	Mathematical Physics I	3	PHY 230	Optics	3
AST 140	Planetary Science	3	PHY 312	Classical Mechanics I	4
MAT 283	Calculus III	4	MAT 340	Differential Equations	3
	<i>Gen. Ed. and Free Electives</i>	3		<i>Gen. Ed. and Free Electives</i>	3
		16			16

Third Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 220	Electronics	3	PHY 327	Thermo. & Stat. Mech.	3
PHY 316	Electromagnetism I	3	PHY 360	Quantum Mechanics I	3
PHY 340	Computational Physics	3		<i>Astronomy Elective</i>	3
AST 342	Astrophysics	3		<i>Gen. Ed. and Free Electives</i>	3
	<i>Gen. Ed. and Free Electives</i>	3		<i>Gen. Ed. and Free Electives</i>	3
		15			15

Fourth Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 380	Senior Seminar	3	PHY 315	Advanced Lab	3
BIO 104	Principles of Biology	4		<i>Gen. Ed. and Free Electives</i>	3
	<i>Gen. Ed. and Free Electives</i>	3		<i>Gen. Ed. and Free Electives</i>	3
	<i>Gen. Ed. and Free Electives</i>	3		<i>Gen. Ed. and Free Electives</i>	3
		13		<i>Gen. Ed. and Free Electives</i>	3
					15

Gen. Ed. and Free Electives

A.1	
A.2	
A.3	
A.4	
B.1	
B.2	
B.3	
D.1	
D.2	
D.3	
Free Elective	

¹Courses in the Physics major are front-loaded in this plan. It is designed with two groups of students in mind:

- Those who wish to go to graduate school in physics and want to complete most of the physics curriculum before taking the GRE-Physics Test in the Fall semester of their senior year
- Those who switch to Physics and wish to complete the major's courses in less than four years (assuming they have many gen. ed. and concomitant courses at the time of switch)

Others who wish to complete the required courses at a more even pace are urged to discuss a suitable course plan with their advisor.

B.S. in Physics / Astronomy²

(This document should not be considered as a substitute for the official program check sheet or a comprehensive discussion with your advisor. Also please refer to the program check sheet for all the footnotes, other guidelines, and requirements.)

First Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 100	Physics I	4	PHY 102	Physics II	4
MAT 181	Calculus I	4	MAT 182	Calculus II	4
CHM 100	General Chemistry I	4	CHM 102	General Chemistry II	4
FYS 100	<i>First Year Seminar</i>	3	AST 142	Stellar & Galactic Astronomy	3
		15			15

Second Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 212	Modern Physics I	3	PHY 214	Modern Physics II	3
PHY 245	Mathematical Physics I	3	PHY 312	Classical Mechanics I	4
AST 140	Planetary Science	3		<i>Astronomy Elective</i>	3
MAT 283	Calculus III	4		<i>Gen. Ed. and Free Electives</i>	3
	<i>Gen. Ed. and Free Electives</i>	3		<i>Gen. Ed. and Free Electives</i>	3
		16			16

Third Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 316	Electromagnetism I	3	PHY 230	Optics	3
PHY 340	Computational Physics	3	PHY 360	Quantum Mechanics I	3
AST 342	Astrophysics	3	MAT 340	Differential Equations	3
	<i>Gen. Ed. and Free Electives</i>	3		<i>Gen. Ed. and Free Electives</i>	3
	<i>Gen. Ed. and Free Electives</i>	3		<i>Gen. Ed. and Free Electives</i>	3
		15			15

Fourth Year

Fall			Spring		
Number	Title	Credits	Number	Title	Credits
PHY 220	Electronics	3	PHY 315	Advanced Lab	3
PHY 380	Senior Seminar	3	PHY 327	Thermo. & Stat. Mech.	3
BIO 104	Principles of Biology	4		<i>Gen. Ed. and Free Electives</i>	3
	<i>Gen. Ed. and Free Electives</i>	3		<i>Gen. Ed. and Free Electives</i>	3
		13		<i>Gen. Ed. and Free Electives</i>	3
					15

Gen. Ed. and Free Electives

A.1	
A.2	
A.3	
A.4	
B.1	
B.2	
B.3	
D.1	
D.2	
D.3	
Free Elective	

²Courses in the Physics major are distributed more uniformly over the four years in this plan. However, those who wish to take the GRE-Physics test in the Fall semester of their fourth year are encouraged to follow the expedited plan.